

REMARKS

Claims 1, 3, 5, 11, 18, and 36-40 have been amended. Claim 2 has been cancelled. Claims 1 and 3-40 remain in the Application. Reconsideration of the claims in light of the amendments and remarks made herein is respectfully requested.

On page 2 of the Office Action, the Examiner rejected claims 18-23 under 35 USC 112, 2nd paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicants regard as their invention. In particular, the Examiner stated that there was insufficient antecedent basis for the limitation "said transparent conducting layer." Applicants have amended claim 18 to correct this error. Withdrawal of the rejection under 35 USC 112, 2nd paragraph is respectfully requested.

Claims 1, 4-8, 15-17 and 24-40 stand rejected under § 102 (b) in view of published application 2002/0167001 (Chen '001). Applicants have amended claim 1 to include the limitations of claim 2 such that the "at least partially transparent electron source layer" is made "of optically transparent metal oxide." Claim 2 was rejected on page 16 of the Office Action under 35 USC 103(a) as being obvious over Negishi et al. in view of US Patent Application Publication to Chen et al. (2003/0160557, Chen '557). However, Chen '557 is commonly assigned to Hewlett Packard Development Co., L.P. as is the instant Application. Please see Reel/Frame 014061/0492 for Chen '557 and Reel/Frame 015007/0132 for the instant application. Accordingly, under 35 USC 103(c)(1), Chen '557 would only qualify as prior art only under subsection (e) of section 102 and thus is disqualified as prior art. Claim 2 is thus believed patentable over the art made of record and thus claim 1, as amended, to include the limitations of claim 2 is thus believed patentable over the art made of record. Claim 2 has accordingly been cancelled. Applicants would also like to note to the Examiner that paragraph 42 of Chen '557 discloses that the cathode layer can be fabricated of a transparent conductor such as InSnOx but not the electron source layer as is claimed in claim 2 of the instant application. As noted in paragraph 42, having the cathode layer have a transparent conductor allows photons to escape the emitter but not electrons. By having the electron source be transparent, photons can be

injected into the tunneling layer to help increase electron and/or photon emission. Accordingly, Chen '557 does not disclose using a transparent conductor for the electron source layer.

Claims 4-8, 15-17, and 24-35 depend directly or indirectly upon claim 1, as amended, and thus are believed patentable over the art made of record.

Claims 36-40 have been similarly amended as claim 1 to include the limitation where the at least partially transparent electron source layer is made of "of optically transparent metal oxide." Accordingly, claims 36-40, as amended, are believed patentable over the art made of record.

Withdrawal of the rejection under 35 USC 102(b) and allowance of claims 1, 4-8, 15-17, and 24-40 is respectfully requested.

On Page 6 of the Office Action, the Examiner rejected claims 1 and 11-14 under 35 USC 102(e) as being anticipated by Chen et al (2003/0160557, Chen '557). As noted by the Applicants above, Chen '557 does not disclose the electron source being a transparent conductor but instead discloses that the cathode layer can be a transparent conductor and hence does not anticipate the claimed invention. As noted above, 35 USC 103(c)(1) disqualifies Chen '557 as a prior art reference for a 103(a) rejection. Accordingly, Claims 1, as amended, and 11-14 are believed patentable over Chen '557. Withdrawal of this rejection and allowance of claims 1 and 11-14, as amended, is respectfully requested.

On Page 8 of the Office Action, claims 1, 4, 6, 7, 15, 25, 26, 33, 36, and 40 were rejected under 35 USC 102(b) as being anticipated by Negishi et. al. This rejection is respectfully traversed as claim 1, as amended, is not disclosed by Negishi for the reasons stated above. That is, Negishi does not disclose wherein the electron source layer is "an optically transparent metal oxide." Withdrawal of the rejection and allowance of claims 1, 4, 6, 7, 15, 25, 26, 33, 36, and 40, as amended, is respectfully requested.

On page 10 of the Office Action, the Examiner rejected claim 5 under 35 USC 103(a) as being unpatentable over Negishi et al as for claim 1, and in view of U.S. Patent to Mardilovich et al. Mardilovich is commonly assigned to Hewlett Packard Development Co., L.P., see

Reel/Frame 013776/0928, as is the instant Application. Mardilovich would qualify only as prior art under subsection (e) of section 102 and thus is disqualified as a prior art reference. Claim 5 has been placed in independent format. Accordingly claim 5, as amended, is believed patentable over the art made of record. Withdrawal of the rejection under 35 USC 103(a) for claim 5, as amended, is respectfully requested.

On Page 10 of the Office Action, the Examiner rejected claims 16-17 under 35 USC 103(a) as being unpatentable over Negishi et al. Claims 16-17 depend upon claim 1, as amended, and thus are believed patentable over Negishi for the reasons stated above. Withdrawal of the rejection under 35 USC 103(a) and allowance of claims 16-17 is respectfully requested.

On Page 11 of the Office Action, the Examiner rejected claims 8-10, 24, 27-35 and 37-39 under 35 USC 103(a) as being obvious over Negishi and in view of US Patent Application Publication to Chen (2002/0167001, Chen '001). Applicant respectfully traverses this rejection based on the amendments made to claim 1 from which claims 8-10, 24, 27-34 depend directly or indirectly, and the amendments made to claims 37-39. Negishi nor Chen '001, alone or in combination, disclose, teach, or suggest wherein the electron source layer is "an optically transparent metal oxide." Accordingly, withdrawal of the rejection under 35 USC 103(a) and allowance of claim 8-10, 24, 27-35, and 37-39 is respectfully requested.

On page 16 of the Office Action, the Examiner rejected claims 2, 3, and 11-14 under 35 USC 103(a) as being obvious over Negishi as for claim 1 and in view of Chen '557. As noted above, Chen '557 is disqualified as prior art and thus claims 2, 3, and 11-14 are believed patentable over the art made of record. Claim 2 has been incorporated into claim 1, as amended. Claim 3 has been amended to now depend upon claim 1, as amended. Claim 11 has been placed in independent format. Withdrawal of the rejection under 35 USC 103(a) and allowance of claims 1, 3, and 11-14, as amended, is respectfully requested.


On page 18 of the Office Action, the Examiner indicated that claims 18-23 would be allowable if rewritten or amended to overcome the rejections under 35 USC 112, 2nd paragraph. Applicant has amended claim 18 and believes the issue has been addressed. Accordingly, claims 18-23 are believed to be in condition for allowance and such allowance is respectfully requested. Applicants wish to thank the Examiner for this indication of allowance.

Applicants believe their claims as amended are patentable over the art of record, and that the amendments made herein are within the scope of a search properly conducted under the provisions of MPEP 904.02. Accordingly, claims 1 and 3-40 are deemed to be in condition for allowance, and such allowance is respectfully requested.

If for any reason the Examiner finds the Application other than in a condition for allowance, the Examiner is respectfully requested to call Applicants' undersigned representative at the number listed below to discuss the steps necessary for placing the application in condition for allowance.

The Commissioner is hereby authorized to charge any additional fees that may be required, or credit any overpayment to Deposit Account No. 08-2025. Should such fees be associated with an extension of time, Applicants respectfully request that this paper be considered a petition therefore.

Hewlett-Packard Company
Legal Department
1000 NE Circle Blvd.
Corvallis, OR 97330
Telephone: (541)715-4197
Fax: (541)715-8581

Respectfully Submitted,
Timothy F. Myers, et al.
By: 
Timothy F. Myers
Patent Attorney
Registration No. 42,919